(a) $x = 5 + \ln t, y = t^2 + 3; (5, 4)$. $\dfrac{dy}{dt} = 2t, \dfrac{dx}{dt} = \dfrac{1}{t}$, and $\dfrac{dy}{dx} = \dfrac{dy/dt}{dx/dt} = \dfrac{2t}{1/t} = 2t^2$. At $(5, 4), x = 5 + \ln t = 5 \quad \Rightarrow$ $\ln t = 0 \quad \Rightarrow \quad t = 1$ and $\dfrac{dy}{dx} = 2$, so an equation of the tangent is $y - 4 = 2(x - 5)$, or $y = 2x - 6$.

(b) $x = 5 + \ln t \quad \Rightarrow \quad x - 5 = \ln t \quad \Rightarrow \quad t = e^{x-5}$, so $y = t^2 + 3 = (e^{x-5})^2 + 3 = e^{2x-10} + 3$ and $y' = e^{2x-10} \cdot 2$. At $(5, 4), y' = e^{2(5)-10} \cdot 2 = 2$, so an equation of the tangent is $y - 4 = 2(x - 5)$, or $y = 2x - 6$.